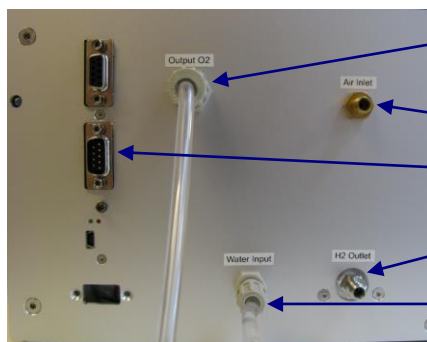


PRESENTATION

1) Connections



Bypass O₂ + H₂O (plunged into the external tank)

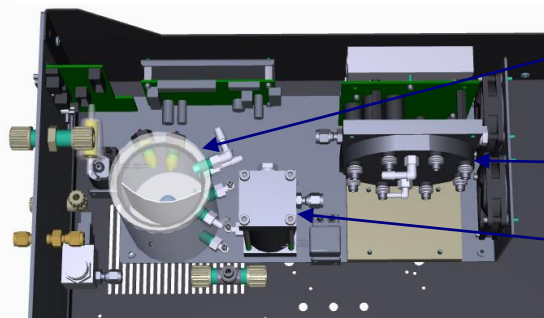
Dry air inlet

RS485/USB cable

H₂ outlet

H₂O inlet (connected to the external tank)

2) Internal elements of the Hydroxychrom

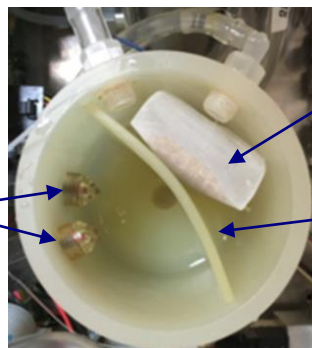


Internal water tank

Electrolytic cell

GLS : high pressure gas-liquid separator

3) Internal water tank layout



Deionization bag

Separator

Should not touch the bottom of the tank

Level sensors

Starting procedure

- 1) Put the deionization bag into the internal water tank or check there is one inside the internal tank. Be sure it is not in contact with level sensors.
- 2) Fill up the external 5 L tank **with 3 liters maximum of deionized water (<0.3uS/cm)** and connect the tank to H₂O inlet of HYDROXYCHROM with Ø 6mm tube supplied (1.5 meters max between generator and tank).
- 3) Connect outlet « Bypass O₂+H₂O » to the external 5L tank in order to collect any water rejected.
- 4) **Important** : Install the external 5L tank **at least 50 cm lower** than the HYDROXYCHROM
- 5) Connect zero air to "INPUT DRY AIR" (4 bars)
- 6) Connect the HYDROXYCHROM to the computer with the **RS485/USB** cable
- 7) Connect the Power supply cable
- 8) Before switching on, connect a syringe filled with deionized water to the water inlet of the electrical cell (disconnect pump outlet) and **remove the clamps**.
- 9) Inject the deionized water to the electrolytic cell. Put back the clamps and remove the water from the internal water tank (repeat this operation to inject a total of 1L of deionized water). This step is important to remove any contamination before switching on the power (see video on <https://support.chromatotec.com/>).
- 10) After the last injection with the syringe, leave the water in the internal tank.
- 11) Switch on the generator. The pump should transfer more water from the external tank to fill up the internal one and the water circuit should be booted.
- 12) Check if the water circuit is well booted and the internal tank is well filled up.
- 13) **Important: Purge** the generator during minimum **1 hour** under a **pressure of 4 Bar and a flow around 80ml/min** before a normal use of the generator. Do not connect to the analyzers during the purge.
- 14) Connect "**OUTPUT H2**" to your analyzer with a 1/8" tubing.
- 15) Check generation is well done (bubbles at the cell outlet and "estimated production" on HYDROXYCHROM Viewer).

SETTINGS

When the HYDROXYCHROM is ON, click on the serial number of H₂ generator (#xxxxxxx) from **VISTACHROM** on your computer. **HYDROXYCHROM** viewer displays.

Pressure

Set Pressure (mBar) 4000

Actual Pressure (mBar) 4001

Adjust pressure

4000 mBar for FID detector
2000 mBar for FPD detector

Operation mode

☐ Off

☒ Continuous On

☐ On

☐ Remote control

☐ Leak-check

Choose your operation mode

Continuous On

LEAK TEST

The H₂ generator is built to deliver 100mL/min or 160 ml/min of H₂ maximum (depending on the model). A little leak can cause the automatic stopping of the generation so it's necessary to check that the H₂ circuit is strictly pressure tight.

- 1) Connect a stopping valve or a plug at H₂ outlet
- 2) Adjust 4000 mbars in H₂ pressure parameter
- 3) Check that when 4 bars are reached, there is no more generation at cell outlet (no bubbles) and check the estimated production on the main window of HYDROXYCHROM Viewer.

Nota:

With 30 mL/min H₂ consumption and with 3L of water, you will have enough water to produce hydrogen during 83 days (without leak of hydrogen).

STOP THE GENERATOR

- 1) Stop your analysers.
- 2) Adjust H₂ pressure to a low value (100 mBar)
- 3) Set operation mode to off
- 4) Switch the power off
- 5) Disconnect all tubes. You can use clamps if the generator is stopped for a long period of time.

⚠ If your HYDROXYCHROM remains powered off for a long time or is transported, you must apply the following procedure:

- 1) Connect zero water inlet to O₂ outlet with a short tube
- 2) Your generator is ready to be transported or stopped for a long period of time.
- 3) Before restarting, **a complete draining of the internal tank should be performed.**
- 4) A Purge of the generator **during minimum 1 hour under a pressure of 4 Bar and a flow around 80ml/mn** is required before reconnecting the HYDROXYCHROM to an analyser.

MAINTENANCE

Use exclusively deionised water and change your deionisation bags each year.

STOCKAGE & TRANSPORT

The HYDROXYCHROM containing water, never exposed it temperatures below +4 degrees Celsius.

If the water present in the generator freezes, it is forbidden to start the generator, be sure to expect the total thaw before startup of HYDROXYCHROM.

No guarantee applied in cases or water freezes inside the HYDROXYCHROM